WHAT IS CLAIMED IS:

1   1. A method of controlling a write current in a magnetic disk drive, the method

2   comprising:

3   receiving a write command to initiate a present write operation; and

4   if a predetermined period of time has elapsed since a most recent write operation

5   terminated,

6   applying a given write current to a write head coil at the beginning of the

7   present write operation, and

8   decreasing the write current during the present write operation, wherein

9   the write current is less than the given write current at the end of the write operation; or

10   if said predetermined period of time has not elapsed since the most recent write

11   operation terminated, applying a write current less than the given write current at the beginning

12   of the present write operation.

1   2. A method of controlling a write current in a magnetic disk drive, the method

2   comprising:

3   receiving a write command to initiate a present write operation; and

4   if a predetermined period of time has elapsed since a most recent write operation

5   terminated,

6   applying a first write current to a write head coil during a first portion of

7   the present write operation, and

8   applying a second write current during a second later portion of the

9   present write operation, wherein the first write current is higher than the second write

10   current; or

11   if said predetermined period of time has not elapsed since a most recent write

12   operation terminated, applying the second write current during the first and second portions of

13   the present write operation.

1   3. The method of claim 2 wherein a transition between the first and second write

2   currents is a smooth transition with a plurality of intermediate write currents.

1   4. The method of claim 2 wherein the first and second write currents are

2   maintained at respective constant levels during the first and second portions of the write

3   operation.

1   5. The method of claim 2 wherein the first write current is achieved by increasing

2   an amount of overshoot during the first portion of the write operation relative to the amount of

3   overshoot during the second portion of the time interval.

1   6. The method of claim 2 wherein said predetermined period of time is between

2   several tens of microseconds and a millisecond.

1   7. The method of claim 2 wherein:

2   the write current applied to the write head coil is specified by a register value; and

3   the register value is set to specify the first write current after said predetermined

4   period of time has elapsed.

1   8. A method of controlling a write current in a magnetic disk drive, the write

2   current being supplied to a write head coil when information targeted for storage is divided into

3   specified segments and is written onto a magnetic disk medium,

4   wherein a larger write current at the beginning of writing than at the end of

5   writing is used when the information is written after the elapse of a predetermined period of time

6   subsequently to the end of the last writing, and substantially the same write current at the

7   beginning of writing as at the end of writing is used when the information is written within a

8   predetermined period of time after the start of writing.

1   9. The method of claim 8 wherein the write current is increased or decreased by

2   increasing or decreasing an amount of overshoot.

1   10. The method of claim 8 wherein said predetermined period of time after the

2   start of writing is between several tens of microseconds and a millisecond.

1   11. A magnetic disk drive comprising:

2   a magnetic disk that rotates during operation;

3   a write head having a coil through which a write current is passed during a write

4   operation; and

5   a write current control circuit that causes said write current to decrease during a

6   write operation so that for an initial portion of the write operation, the write current is higher than

7   the write current for an ending portion of the write operation.

1   12. The magnetic disk drive of claim 11 wherein the initial portion is defined by

2   a predetermined number of sectors.

1   13. The magnetic disk drive of claim 11 wherein the write current decreases as a

2   smooth function during the write operation.

1   14. The magnetic disk drive of claim 11 wherein the write current is held at a first

2   value for a first portion of the write operation and then at a second, lower value following the

3   first portion of the write operation.

1   15. A magnetic disk drive using a magnetic head for energizing a coil when

2   information targeted for storage is divided into specified segments and is written onto a magnetic

3   disk medium,

4   wherein said magnetic disk drive has a function of setting the value of write

5   current to be supplied to the coil for each of said specified segments and records a information

6   while varying the write current during a writing sequence.

1   16. The magnetic disk drive of claim 15 wherein said specified segments are

2   sectors.

1   17. The magnetic disk drive of claim 15 wherein said magnetic disk drive has a

2   function of setting an overshoot instead of setting said write current and records the information

3   at various settings for said write current by varying the overshoot.